

Attorney Docket No.: 21835-00004

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**Applicant** 

: Michael F. Thomashow, et al

Art Unit

1638

Serial No.

10/632,436

Examiner

Filed

August 1, 2003

Title

: Transcription Factors to Improve Plant Stress Tolerance

Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

## INFORMATION DISCLOSURE STATEMENT

In compliance with the duty of disclosure under 37 C.F.R. §1.56 and §1.97-1.98, the references listed and identified on the attached substitute Form PTO 1449 are being submitted herewith for consideration by the Examiner. This Statement is being filed in accordance with 37 C.F.R. §1.97(b)(3).

While this Statement is being filed in compliance with the duty of disclosure, citation of the attached references is not to be construed as an admission that any of the references are material as defined under 37 C.F.R. §1.56(b).

A copy of each reference, AA-EM, listed on the attached substitute Form PTO 1449 is included herewith. Consideration and entry into the record of these references is respectfully requested.

Date: 3 Mar 20

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Respectfully submitted,

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I hereby certify under 37 CFR §1.10 that this correspondence and all referenced attachments are being deposited with the United States Postal Service Express Mail Service Post Office to Addressee on the date indicated below and is addressed to Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

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L'orri A. Rosier

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Substitute Form PTO 1449 WW (Modified)

U.S. Department of Commerce Patent and Trademark Office Attorney's Docket No. 21835-00004 Application No. 10/632,436

nformation by Applicant
(Use several sheets if necessary)

Applicant

Michael F. Thomashow, et al

37 CFR §1.98(b)

Filing Date Group Art Unit

	U.S. Patent Documents						
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	US 4,683,195	07-28-1987	Mullis et al			
	AB	US 4,683,202	07-28-1987	Mullis			
	AC	US 4,965,188	10-23-1990	Mullis et al			
	AD	US 5,296,462	03-22-1994	Thomashow			-
	AE	US 5,356,816	10-18-1994	Thomashow			
	AF	US 5,420,034	05-30-1995	Kridl et al			
	AG	US 5,773,696	06-30-1998	Liang et al			
	АН	US 5,773,701	06-30-1998	Braun, III et al			
	Al	US 5,891,859	04-06-1999	Thomashow et al			
	AJ	US 5,892,009	04-06-1999	Thomashow et al			
	AK	US 5,929,305	07-27-1999	Thomashow et al			
	AL	US 5,965,705	10-12-1999	Thomashow et al			
}	AM	US 6,417,428 B1	07-09-2002	Thomashow et al			

	Foreign Patent Documents or Published Foreign Patent Applications							
Examiner	1 9 1	Publication	Country of	Class	Subclass	Trans	lation	
Initial	ID ·	Number	Date	Patent Office			Yes	No
	AN	0120516 B1	10-23-1991	EPO				

	Other Documents (include Author, Title, Date, and Place of Publication)					
Examiner Initial						
	AO	Abbaraju, H.K.R. and Oliver, D.J. Direct submission to GenBank, accession number AF079503				
•	AP	Abler, M.L., and Green, P.J. Control of mRNA stability in higher plants. Plant Mol. Biol. 32:63-78, 1996				
9	AQ	Adamska, I. ELIPs – Light-induced stress proteins. Physiol. Planatrum 100:794-805, 1997				

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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No.	21835-00004	Application No.	10/632,436
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(Use several sheets if 37 CFR §1.98(b)	necessary)	Filing Date	08-01-2003	Group Art Unit	1638

		Other Documents (include Author, Title, Date, and Place of Publication)
Examiner Initial	Desig. ID	Document
	AR	Aldemita, R. and Hodges, T. <i>Agrobacterium tumefaciens</i> -mediated transformation of <i>japonica</i> and <i>indica</i> rice varieties. Planta 199:612-617, 1996
	AS	Ammirato et al. (1984) Handbook of Plant Cell CultureCrop Species. Macmillan Publ. Co.
	AT	Anderson, M.L.M. and Young, B.D. Quantitative Filter Hybridisation, in Nucleic Acid Hybridisation, 1985
	AU	Baker, S.S., Wilhelm, K.S., and Thomashow, M.F. The 5 -region of <i>Arabidopsis thaliana cor15a</i> has <i>cis</i> -acting elements that confer cold-, drought- and ABA-regulated gene expression. Plant. Mol. Biol. 24:701-713, 1994
	AV	Beator, J., Pötter, and Kloppstech, K. The Effect of Heat Shock on Morphogenesis in Barley. Plant Physiol. 100:1780-1786, 1992
	AW	Berry, J. A. and Raison, J.K. Responses of Macrophytes to Temperature. In Encyclopedia of Plant Physiology, Vol. 12A, eds. Lange, O. L., Nobel, P. S., Osmond, C. B. and Ziegler, H. (Springer, Berlin), pp. 277-338, 1981
	AX	Bevan, M. Binary Agrobacterium vectors for plant transformation. Nucleic Acids Res. 12:8711-8721, 1984
	AY	Chamberlin, M., McGrath, J., and Waskell, J. New RNA Polymerase from <i>Escherichia coli</i> infected with Bacteriophage T7. Nature 228:227-231, 1970
	AZ	Christou, P., Ford, T.L., and Kofron, M. Production of Transgenic Rice ( <i>Oryza Sativa</i> L.) Plants from Agronomically Important Indica and Japonica Varieties Via Electric Discharge Particle Acceleration of Exogenous DNA into Immature Zygotic Embryos. Bio/Technology 9:957-962, 1991
	ВА	Ciardi, J.A., Deikman, J., and Orzolek, M.D. Increased ethylene synthesis enhances chilling tolerance in tomato. Physiol. Plantarum 101:333-340, 1997
	ВВ	Desikan, R., Mackerness, S., Hancock, J.T., and Neill, S.J. Regulation of the Arabidopsis Transcriptome by Oxidative Stress. Plant Physiol. 127:159-172, 2001
	вс	Ding, J.P. and Pickard, B.G. Modulation of mechanosensitive calcium-selective cation channels by temperature. Plant J. 3:713-720, 1993
	BD	Eimert, K., Wang, S., Lue, W., and Chen, J. Monogenic Recessive Mutations Causing Both Late Floral Initiation and Excess Starch Accumulation in Arabidopsis. The Plant Cell 7:1703-1712, 1995
	BE	Fling, M.E., Kopf, J., and Richards, C. Nucleotide sequence of the transposon Tn7 gene encoding an aminoglycoside-modifying enzyme, 3"(9)-O-nucleotidyltransferase. Nucleic Acids Res. 13:7095-7106, 1985

Examiner Signature	Cons	onsidered	
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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No.	21835-00004	Application No.	10/632,436
Information Disclo	Applicant		Michael F.	Thomashow et al	
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		Other Documents (include Author, Title, Date, and Place of Publication)
Examiner Desig. Initial ID		Document
	BF	Fowler, Sarah, Lee, K., Onouchi, H., Samach, A., Richardson, K., Morris, B., Coupland, G., and Putterill, J. <i>GIGANTEA:</i> a circadian clock-controlled gene that regulates photoperiodic flowering in <i>Arabidopsis</i> and encodes a protein with several possible membrane-spanning domains. EMBO J. 18:4679-4688, 1999
	BG	Fraley, R.T., Rogers, S.G., Horsch, R.B., Sanders, P.R., Flick, J.S., Adams, S.P., Bittner, M.L., Brand, L.A., Fink, C. L., Fry, J.S., Galluppi, G. R., Goldberg, S.B., Hoffmann, N.L., and Woo, S.C. Expression of bacterial genes in plant cells. Proc. Natl. Acad. Sci. USA 80:4803-4807, 1983
	ВН	Fromm, M.E., Morrish, F., Armstrong, C. Williams. R., Thomas, J., and Klein, T.M. Inheritance and Expression of Chimeric Genes in the Progeny of Transgenic Maize Plants. Bio/Technology 8:833-839, 1990
	ВІ	Fujimoto, S.Y., Ohta, M., Usui, A., Shinshi, H., and Ohme-Takagi, M. Arabidopsis Ethylene-responsive Element Binding Factors Act as Transcriptional Activators or Repressors of GCC Box-Mediated Gene Expression. The Plant Cell 12:393-404, 2000
	BJ	Gilmour, S.J., Zarka, D.G., Stockinger, E.J., Salazar, M.P., Houghton, J.M., and Thomashow, M.F. Low temperature regulation of the <i>Arabidopsis</i> CBF family of AP2 transcriptional activators as an early step in cold-induced COR gene expression. Plant J. 16, 433-442, 1998
	ВК	Gilmour, S.J., Sebolt, A.M., Salazar, M.P., Everard, J.D., and Thomashow, M.F. Overexpression of the Arabidopsis CBF3 Transcriptional Activator Mimics Multiple Biochemical Changes Associated with Cold Acclimation. Plant Physiol. 124:1854-1865, 2000
	BL	Gordon-Kamm, W., Spencer, T.M., Mangano, M.L., Adams, T.R., Daines, r.J., Start, W.G., O'Brien, J.V., Chambers, S.A., Adams, W.R., Willetts, N.G., Rice, T.B., Mackey, C.J., Krueger, R.W., Kausch, A.P., and Lemaux, P.G. Transformation of Maize Cells and Regeneration of Fertile Transgenic Plants. The Plant Cell 2:603-618, 1990
	ВМ	Guy, C. L., Cold Acclimation and Freezing Stress Tolerance: Role of Protein Metabolism. Annu. Rev. Plant Physiol. Plant Mol. Biol. 41:187-223, 1990
	BN	Hajela, R. K., Horvath, D. P., Gilmour, S.J., and Thomashow, M.F. Molecular Cloning and Expression of cor (Cold-Regulated) Genes in <i>Arabidopsis thaliana</i> . Plant Physoil. 93:1246-1252, 1990
	во	Heddad, M. and Adamska, I. Light stress-regulated two-helix proteins in <i>Arabidopsis thaliana</i> related to the chlorophyll a/b-binding gene family. Proc. Natl. Acad. USA 97:3741-3746, 2000
•	BP	Heintzen, C., Meizer, S., Fischer, R., Kappeler, S., Apel, K., and Staiger, D. A light- and temperature-entrained circadian clock controls expression of transcripts encoding nuclear proteins with homology to RNA-binding proteins in meristematic tissue. Plant J. 5:799-813, 1994
•	BQ	Herrera-Estrella, L., Depicker, A., VanMontagu, M. and Schell, J. Expression of chimaeric genes transferred into plant cells using a Ti-plasmid-derived vector. Nature 303:209-213, 1983

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	BR	Hiei, Y., Ohta, S., Komari, T., and Kumashiro, T. Efficient transformation of rice ( <i>Oryza sativa</i> L.) mediated by <i>Agrobacterium</i> and sequence analysis of the boundaries of the T-DNA. Plant J. 6:271-282, 1994
	BS	Hiratsu, K., Ohta, M., Matsui, K., and Ohme-Takagi, M. The SUPERMAN protein is an active repressor whose carboxy-terminal repression domain is required for the development of normal flowers. FEBS Letters 514:351-354, 2002
	ВТ	Horvath, D.P., McLarney, and Thomashow. Regulation of <i>Arabidopsis</i> thaliana L. (Heyn) cor78 in Response to Low Temperature. Plant Physiol. 103:1047-1053, 1993
	BU	Huner, N., Oquist, G., and Sarhan, F. Energy balance and acclimation to light and cold. Trends Plant Sci. 3:224-230, 1998
	BV	Huq, E., Tepperman, J.M., and Quail, P. GIGANTEA is a nuclear protein involved in phytochrome signaling in <i>Arabidopsis</i> . Proc. Natl. Acad. Sci. USA 97:9789-9794, 2000
	BW	Ishida, Y., Saito, H., Ohta, S., Hiei, Y., Komari, T., and Kumashiro, T. High efficiency transformation of maize (Zea mays L.) mediated by Agrobacterium tumefaciens. Nature Biotech. 14:745-750, 1996
	вх	Ishitani, M., Xiong, L., Lee, H., Stevenson, B. and Zhu, J. <i>HOS1</i> , a Genetic Locus Involved in Cold-Responsive Gene Expression in Arabidopsis. Plant Cell 10:1151-1161, 1998
,	BY	Jaglo-Ottosen, K.R., Gilmour, S.J., Zarka, D.G., Schabenberger, O., Thomashow, M.F. Arabidopsis CBF1 Overexpression Induces COR Genes and Enhances Freezing Tolerance. Science, 280:104-106, 1998
	BZ	Jaglo, K.R., Kleff, S., Amundsen, K.L., Zhang, X., Haake, V., Khang, J.Z., Deits, T., and Thomashow, M.F. Components of the Arabidopsis C-Repeat/Dehydration-Response Element Binding Factor Cold-Response Pathway Are Conserved in <i>Brassica napus</i> and Other Plant Species. Plant Physiol., 127:910-917, 2001
	CA	Jiang, C., Iu, B. and Singh, J. Requirement of a CCGAC <i>cis</i> -acting element for cold induction of the N115 gene from winter <i>Brassica napus</i> . Plant Mol. Biol. 30:679-684, 1996
	СВ	Kacian, D.L, Mills, D.R., Kramer, F.R., and Spiegelman, S. A Replicating RNA Molecule Suitable for a Detailed Analysis of Extracellular Evolution and Replication. Proc. Natl. Acad. Sci. USA 69:3038-3042, 1972
	СС	Kagaya, Y., Ohmiya, K., and Hattori, T. RAV1, a novel DNA-binding protein, binds to bipartite recognition sequence through two distinct DNA-binding domains uniquely found in higher plants. Nucleic Acids Res. 27:470-478, 1999
	CD	Kay, R., Chan, A., Daly, M., and McPherson, J. Duplication of CaMV 35S Promotor Sequences Creates a Strong Enhancer for Plant Genes. Science 236:1299-1302, 1987
	CE	Klee, H.J., Yanofsky, M.F., and Nester, E.W. Vectors for Transformation of Higher Plants. Bio/Technology 3:637-642, 1985

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	CF	Kloppstech, K., Otto, B., and Sierralta, W. Cyclic temperature treatments of dark-grown pea seedlings induce a rise in specific transcript levels of light-regulated genes related to photomorphogenesis. Mol. Gen. Genet 225:468-473, 1991
	CG	Knight, H., Trewavas, A.J., and Knight, M.R. Cold Calcium Signaling in Arabidopsis Involves Two cellular Pools and a Change in Calcium Signature after Acclimation. The Plant Cell 8:489-503, 1996
	СН	Knight, M.R., Campbell, A.K., Smith, S.M., and Trewavas, A.J. Transgenic plant aequorin reports the effects of touch and cold-shock and elicitors on cytoplasmic calcium. Nature 352:524-526, 1991
	CI	Koncz, C. and Schell, J. The promoter of T <sub>L</sub> -DNA gene 5 controls the tissue-specific expression of chimaeric genes carried by a novel type of Agrobacterium binary vector. Mol. Gen. Genet 204:383-396, 1986
	Cl	Koomneef, M., Hanhart, C. J., and vanderVeen, J.H. A genetic and physiological analysis of late flowering mutants in <i>Arabidopsis</i> thaliana. Mol. Gen. Genet 229:57-66, 1991
	СК	Kranz, H.D., Denekamp, M., Greco, R., Jin, H., Leyva, A., Meissner, R., Petroni, K., Urzainqui, A., Bevan, M., Martin, C., Smeekens, S., Tonelli, C., Paz-Ares, J., and Weisshaar, B. Towards functional characterisation of the members of the R2R3-MYB gene family from <i>Arabidopsis thaliana</i> . Plant J. 16:263-276, 1998
	CL	Krapp, A. and Stitt, M. An evaluation of direct and indirect mechanisms for the "sink-regulation" of photosynthesis in spinach: Changes in gas exchange, carbohydrates, metabolites, enzyme activities and steady-state transcript levels after cold-girdling source leaves. Planta 195:313-323, 1995
	СМ	Lang, A. Physiology of flower initiation. In Encyclopedia of Plant Physiology, Vol.15-1, ed. Ruhland, W. (Springer, Berlin), pp. 1484-1536, 1965
	CN	Lee, Y. and Chun, J. A new homeodomain-leucine zipper gene from <i>Arabidopsis thaliana</i> induced by water stress and abscisic acid treatment. Plant Mol. Biol. 37:377-384, 1998
,	со	Lipshutz, R. J., Fodor, S.P.A., Gingeras, T. R., and Lockhart, D.J. High density synthetic oligonucleotide arrays. Nat. Genet. Supp. 21:20-24, 1999
	СР	Liu, Q., Kasuga, M., Sakuma, Y., Abe, H., Miura, S., Yamaguchi-Shinozaki, K., and Shinozaki, K. Two Transcription Factors, DREB1 and DREB2, with an EREBP/AP2 DNA Binding Domain Separate Two Cellular Signal Transduction Pathways in Drought- and Low-Temperature-Responsive Gene Expression, Respectively, in Arabidopsis. Plant Cell 10:1391-1406, 1998
•	CQ	Kasuga, M., Liu, Q., Miura, S., Yamaguchi-Shinozaki, K. and Shinozaki, K. Improving plant drought, salt, and freezing tolerance by gene transfer of a single stress-inducible transcription factor. Nature Biotechnol. 17:287-291, 1999
	CR	Mayer et al., Sequence and analysis of chromosome 4 of the plant <i>Arabidopsis thaliana</i> . Nature 402:769-777, 1999

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EXAMINER: Initials citation considered. Draw line through citation form with next communication to applicant.	if not in conformance and not considered. Include copy of this

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	cs	McCarty, D.R., Hattori, T., Carson, C.B., Vasil, V., Lazar, M., and Vasil, I. The <i>Viviparous-1</i> Developmental Gene of Maize Encodes a Novel Transcriptional Activator. Cell 66:895-905, 1991
	СТ	McWatters, H.G., Bastow, R.M., Hall, A., and Millar, A.J. The ELF3 zeitnehmer regulates light signaling to the circadian clock. Nature 408:716-720, 2000
	CU	Meissner, R. and Michael, A.J. Isolation and characterisation of a diverse family of <i>Arabidopsis</i> two and three-fingered C₂H₂ zinc finger protein genes and cDNAs. Plant Mol. Biol. 33: 615-624, 1997
	CV	Monroy, A.F., Sarhan, F., and Dhindsa, R. Cold-Induced Changes in Freezing tolerance, Protein Phosphorylation, and Gene Expression. Plant Physiol. 102:1227-1235, 1993
	cw	Monroy, A.F. and Dhindsa, R.S. Low-Temperature Signal transduction: Induction of Cold Acclimation- Specific Genes of Alfalfa by Calcium at 25°C. The Plant Cell, 7:321-331, 1995
	сх	Moscovici-Kadouri, S., Chamovitz, D.A. The Electronic Plant Gene Register. Plant Physiol. 115:1287-1289, 1997
	CY	Odell, J. T., Nagy, F., and Chua, N. Identification of DNA sequences required for activity of the cauliflower mosaic virus 35S promoter. Nature 313:810-812, 1985
	CZ	Ohta, M., Matsui, K., Hiratsu, K., Shinshi, H., and Ohme-Takagi, M. Repression Domains of Class II ERF Transcriptional Repressors Share an Essential Motif for Active Repression. The Plant Cell 13:1959-1968, 2001
	DA	Okamuro, J.K., Caster, B., Villarroel, R., VanMontagu, M. and Jofuku, K.D. The AP2 domain of <i>APETALA2</i> defines a large new family of DNA binding proteins in <i>Arabidopsis</i> . Proc. Natl. Acad. Sci. USA 94:7076-7081, 1997
	DB	østergaard, L., Pedersen, A.G., Jespersen, H.M., Brunak, S., and Welinder, K.G. Computational analyses and annotations of the <i>Arabidopsis</i> peroxidase gene family. FEBS Letters 433:98-102, 1998
·	DC	Pang, P., Pruitt, R.E., and Meyerowitz, E.M. Molecular cloning, genomic organization, expression and evolution of 12S seed storage protein genes of <i>Arabidopsis thaliana</i> . Plant Molecular Biology 11:805-820, 1988
•	DD	Park, D.H., Somers, D.E., Kim, Y.S., Choy, Y.H., Lim, H.K., Soh, M.S., Kim, H.J., Kay, S.A., and Nam, H.G. Control of Circadian Rhythms and Photoperiodic Flowering by the <i>Arabidopsis GIGANTEA</i> Gene. Science 285:1579-1582, 1999
•	DE	Rashid, H., Yokoi, S., Toriyama, K., and Hinata, K. Transgenic plant production mediated by <i>Agrobacterium</i> in <i>Indica</i> rice. Plant Cell Rep. 15:727-730, 1996
	DF	Sambrook, et al., Molecular Cloning: A Laboratory Manual 2 <sup>nd</sup> Edition, Cold Spring Harbor Press, NY, pp 7.39-7.52, 1998
	DG	Sambrook et al., Molecular Cloning: A Laboratory Manual 2 <sup>nd</sup> Edition, Cold Spring Harbor Press, NY, pp 9.31-9.58, 1989

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	DH	Seki, M., Narusaka, M., Abe, H., Kasuga, M., Yamaguchi-Shinozaki, K., Caminci, P., Hayashizaki, Y., and Shinozaki, K. Monitoring the Expression Pattern of 1300 Arabidopsis Genes under Drought and Cold Stresses by Using a Full-Length cDNA Microarray. The Plant Cell 13:61-72, 2001
	DI	Shimamoto, K., Terada, R., Izawa, T., and Fujimoto, H. Fertile transgenic rice plants regenerated from transformed protoplasts. Nature 338:274-276, 1989
	DJ	Shinozaki, K. and Yamaguchi-Shinozaki, K. Molecular responses to dehydration and low temperature: differences and cross-talk between two stress signaling pathways. Plant Bio. 3:217-233, 2000
	DK	Shinwari, Z.K., Nakashima, K., Miura, S., Kasuga, M., Seki, M., Yamaguchi-Shinozaki, K., and Shinozaki. K. An <i>Arabidopsis</i> Gene Family Encoding DRE/CRT Binding Proteins Involved in Low-Temperature-Responsive Gene Expression. Biochem. and Biophys. Res. Comm. 250:161-170, 1998
	DL	Stalker, D.M., Thomas C.M., and Helinski, D.R. Nucleotide Sequence of the Region of the Origin of Replication of the Broad Host Range Plasmid RK2. Mol. Gen. Genet. 181:8-12, 1981
	DM	Stockinger, E. J., Gilmour, S.J., and Thomashow, M.F. <i>Arabidopsis thaliana CBF1</i> encodes an AP2 domain-containing transcriptional activator that binds to the C-repeat/DRE, a cis-acting DNA regulatory element that stimulates transcription in response to low temperature and water deficit. Proc. Natl. Acad. Sci. USA 94:1035-1040, 1997
	DN	Strand, A., Hurry, V., Gustafsson, P., and Gardeström, P. Development of <i>Arabidopsis thaliana</i> leaves at low temperatures releases the suppression of photosynthesis and photosynthetic gene expression despite the accumulation of soluble carbohydrates. Plant J. 12:605-614, 1997
	DO	Taji, T., Ohsumi, C., Iuchi, S., Seki, M., Kasuga, M., Kobayashi, M., Yamaguchi-Shinozaki, K., and Shinozaki, K. Important roles of drought- and cold-inducible genes for galactinol synthase in stress tolerance in <i>Arabidopsis thaliana</i> . Plant J. 29:417-426, 2002
	DP	Takatsuji, H., Nakamura, N., and Katsumoto, Y. A New Family of Zinc Finger Proteins in Petunia: Structure, DNA Sequence Recognition, and Floral Organ-Specific Expression. The Plant Cell, 6:947-958, 1994
	DQ	Terryn, N., Gielen, J., DeKeyser, A., VanDenDaele, H., Ardiles, W., Neyt, P., DeClercq, R., Coppieters, J., Déhais, P., Villarroel, R., Rouzé, P., and VanMontagu, M. Sequence analysis of a 40-kb <i>Arabidopsis thaliana</i> genomic region located at the top of chromosome 1. Gene 215:11-17, 1998
•	DR	Thomashow, M.F. So What's New in the Field of Plant Cold Acclimation? Lots! Plant Physiol. 125:89-93, 2001
,	DS	Thomashow, M.F. Plant Cold Acclimation: Freezing tolerance Genes and Regulator Mechanisms. Annu. Rev. Plant Physiol. Plant Mol. Biol. 50:571-599, 1999
	DT	Vasil, V., Castillo, A. M., Fromm, M.E., and Vasil, I.K. Herbicide Resistant Fertile Transgenic Wheat Plants Obtained by Microprojectile Bombardment of Regenerable Embryogenic Callus. Bio/Technology 10:667-674, 1993

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Examiner Initial	Desig. ID	Document
	DU	Vasil, V., Redway, F., and Vasil, I.K. Regeneration of Plants from Embryogenic Suspension Culture Protoplasts of Wheat ( <i>Triticum Aestivum</i> L.) Bio/Technology 8:429-434 (1990)
	DV	Wan, Y. and Lemeaux, P. Generation of Large Numbers of Independently Transformed Fertile Barley Plants. Plant Physiol. 104:37-48, 1994
	DW	Wang, H., Datla, R., Georges, F., Loewen, M. and Cutler, A.J. Promotors from <i>kin1</i> and <i>cor6.6</i> , two homologous <i>Arabidopsis thaliana</i> genes: transcriptional regulation and gene expression induced by low temperature, ABA, osmoticum and dehydration. Plant Mol. Biol. 28:605-617, 1995.
	DX	Wanner, L. and Junttila, O. Cold-Induced Freezing Tolerance in Arabidopsis. Plant Physiol. 120:391-399 (1999)
	DY	Weeks, T., Anderson O., and Blechl, A. Rapid Production of Multiple Independent Lines of Fertile Transgenic Wheat. Plant Physiol. 102:1077-1084, 1993
	DZ	White, T.C., Simmonds, D., Donaldson, P. and Singh, J. Regulation of <i>BN115</i> , a Low-Temperature-Responsive Gene from Winter <i>Brassica napus</i> . Plant Physiol. 106:917-928, 1994
	EA	Wu, A.Y. and Wallace, R. B. The Ligation Amplification Reaction (LAR) – Amplification of Specific DNA Sequences Using Sequential Rounds of Template-Dependent Ligation. Genomics 4:560-569, 1989
	EB	Xia, B., Ke, H., and Inouye, M. Acquirement of cold sensitivity by quadruple deletion of the cspA family and its suppression by PNPase S1 domain in Escherichia coli. Mol. Microbiol. 40:179-188, 2001
	EC	Xin, Z. and Browse, J. eskimo1 mutants of Arabidopsis are constitutively freezing-tolerant. Proc. Natl. Acad. Sci. USA 95:7799-7804, 1998
	ED	Yamaguchi-Shinozaki, K. and Shinozaki, K. The plant hormone abscisic acid mediates the drought-induced expression but not the seed-specific expression of rd22, a gene responsive to dehydration stress in <i>Arabidopsis thaliana</i> . Mol Gen Genet 238:17-25, 1993
<del>-</del>	EE	Yamaguchi-Shinozaki, K. and Shinozaki, K. <i>Arabidopsis</i> DNA Encoding Two Desiccation-Responsive rd29 Genes. Plant Physiol.101:1119-1120, 1993
-	EF	Yamaguchi-Shinozaki, K. and Shinozaki, K. A Novel cis-Acting Element in an Arabidopsis gene is Involved in Responsiveness to Drought, Low-Temperature, or High-Salt Stress. The Plant Cell 6:251-264, 1994
•	EG	Yoshiba, Y., Kiyosue, T., Katagiri, T., Ueda, H., Mizoguchi, T., Yamaguchi-Shinozaki, K., Wada, K., Harada, Y., and Shinozaki, K. Plant J. 7:751-760, 1987
•	EH	Yu, X., Griffith, M. and Wiseman, S.B. Ethylene Induces Antifreeze Activity in Winter Rye Leaves. Plant Physiol. 126:1232-1240, 2001
	EI	Dong, J., et al, Agrobacterium-mediated transformation of Javanica rice. Mol. Breeding, 2:267-276, 1996
	EJ	Yamanaka, K., Cold Shock Response in Escherichia coli, J. Mol. Microbiol. Biotechnol., 1(2): 193-202, 1999

Examiner Signature	Considered	
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this		

form with next communication to applicant.

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No.	21835-00004	Application No.	10/632,436
Information Disclosure Statement by Applicant (Use several sheets if necessary)  37 CFR §1.98(b)		Applicant		Michael F.	Thomashow, et al
		Filing Date	08-01-2003	Group Art Unit	1638

	Other Documents (include Author, Title, Date, and Place of Publication)				
Examiner Initial	Desig. ID	Document			
	EK	Marrs, K.A., Annu. Rev. Plant Physiol. Plant Mol. Biol., 47:127-58, 1996			
	EL	Morgan, P.W. and Drew, M.C., Physiologia Plantarum 100:620-630, 1997			
	ЕМ	Sambrook, M.J. and Russell, D.W., Molecular Cloning A Laboratory Manual, 3 <sup>rd</sup> Edition, Cold Spring Press, NY, pp 8.4-8.11, 2001			
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Examiner Signature	Considered